

## EAST Search History

L2	53	I1 and (diffract or diffracting or diffracted or diffraction)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:22
L3	1	10/602374	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:20
L4	37	I1 and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:30
L5	138	("20010050815" "20020006586" "20020110328" "20030112515" "3993485" "5327443" "5592578" "6350945" "6552368" "6595671" "6610598")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:30
L6	63	I5 and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:31
L7	5	I5 and grating and (heatsink or (heat near sink))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:34
L8	2462	grating and (heatsink or (heat near sink))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:34
L9	16	((epoxy or resin or encapsulant or encapsulation) same grating same (heatsink or (heat near sink)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:36
L10	3828	((epoxy or resin or encapsulant or encapsulation) same grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:36
L11	135	((epoxy or resin or encapsulant or encapsulation) same grating same (led or (light adj (emitter or emitting))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:37

## EAST Search History

L12	280	((epoxy or resin or encapsulant or encapsulation) same (diffract or diffractive or diffracting or diffraction or grating) same (led or (light adj (emitter or emitting))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:38
L13	297	((epoxy or resin or encapsulant or encapsulation) same (diffract or diffractive or diffracting or diffraction or grating) same (emitter or led or (light adj (emitter or emitting))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:38
L14	68	((epoxy or resin or encapsulant or encapsulation) same (diffract or diffractive or diffracting or diffraction or grating) same pattern same (emitter or led or (light adj (emitter or emitting))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L15	103066	(predetermined near2 pattern)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L16	103121	((predesignated or predetermined) near2 pattern)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L17	3207	((predesignated or predetermined) near2 pattern) and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L18	692	((predesignated or predetermined) near2 pattern) and grating and (light adj emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L19	184	((predesignated or predetermined) near2 pattern).clm. and grating and (light adj emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:41
L20	69	((predesignated or predetermined) near2 pattern).clm. and grating. clm. and (light adj emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:43

## EAST Search History

L21	29	((predesignated or predetermined) near2 pattern).clm. and grating. clm. and (emitter or led or (light adj emitting)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:43
L22	34	((predesignated or predetermined) near5 pattern).clm. and grating. clm. and (emitter or led or (light adj emitting)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:44
L23	24421	((diffractive adj element) or grating) with (direction or directional or predetermined or predesignated)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:44
L24	4356	((diffractive adj element) or grating) with (direction or directional or predetermined or predesignated) with (pattern or emission or emit or emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:45
L25	3362	((diffractive adj element) or grating) near10 (direction or directional or predetermined or predesignated) with (pattern or emission or emit or emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:45
L26	2865	((diffractive adj element) or grating) near10 (direction or directional or predetermined or predesignated) near10 (pattern or emission or emit or emitting)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:45
L27	308	((diffractive adj element) or grating) near10 (direction or directional or predetermined or predesignated) near10 (pattern or emission or emit or emitting) and (led or emitter or (light adj emitting)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:45
L28	251	((diffractive adj element) or grating) near10 (direction or directional or predetermined or predesignated) near10 (pattern or emission or emit or emitting) and (led or emitter or (light adj emitting)).clm. and grating.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:46

## EAST Search History

L29	57	((diffractive adj element) or grating) near10 (direction or directional or predetermined or predesignated) near10 (pattern or emission or emit or emitting) and (led or emitter or (light adj emitting)).clm. and grating.clm. and (heatsink or heat-sink or (heat near sink))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:48
L30	72	((diffractive adj element) or grating) with (direction or directional or predetermined or predesignated) with (pattern or emission or emit or emitting) and (led or emitter or (light adj emitting)).clm. and grating.clm. and (heatsink or heat-sink or (heat near sink))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:50
L31	4	(lead or leadframe or lead-frame or (lead near frame)) same (led or emitter or emitting) same (mount or mounting or mounted) same (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating) same (diffract or diffracting or diffracted or diffractive) same (element or grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:53
L32	4	(lead or leadframe or lead-frame or (lead near frame)) same (led or emitter or emitting) same (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating) same (diffract or diffracting or diffracted or diffractive) same (element or grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:54
L33	13	(lead or leadframe or lead-frame or (lead near frame)) same (led or emitter or emitting) same (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating) same (diffract or diffracting or diffracted or diffractive or diffraction) same (element or grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 11:56

## EAST Search History

L34	30	(lead or leadframe or lead-frame or (lead near frame)) same (led or emitter or emitting) same (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating) same (diffract or diffracting or diffracted or diffractive or diffraction or grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:00
L35	109	(lead or leadframe or lead-frame or (lead near frame)).ti,ab,clm. and (led or emitter or emitting).ti, ab,clm. and (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating or encapsulated).ti,ab,clm. and (diffract or diffracting or diffracted or diffractive or diffraction or grating)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:01
L36	46	(lead or leadframe or lead-frame or (lead near frame)).ti,ab,clm. and (led or emitter or emitting).ti, ab,clm. and (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating or encapsulated).ti,ab,clm. and (diffract or diffracting or diffracted or diffractive or diffraction or grating).ti,ab,clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:09
L37	24	(lead or leadframe or lead-frame or (lead near frame)).ti,ab,clm. and (led or emitter or emitting).ti, ab,clm. and (epoxy or resin or encapsulation or encapsulant or encapsulate or encapsulating or encapsulated).ti,ab,clm. and (diffract or diffracting or diffracted or diffractive or diffraction or grating).ti,ab,clm. and (light near10 (diffract or diffracted or diffractive or diffraction))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:13

## EAST Search History

L39	45	I38 and (light near10 (diffract or diffracted or diffractive or diffraction))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:13
L40	23	I38 and ((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) with light near10 (diffract or diffracted or diffractive or diffraction))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:16
L41	14	I38 and ((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) with light near10 (diffract or diffracted or diffractive or diffraction)) and (lead or leadframe or lead-frame or (lead near frame))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:17
L42	17	I38 and ((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) same light near10 (diffract or diffracted or diffractive or diffraction)) and (lead or leadframe or lead-frame or (lead near frame))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:17
L43	8	I38 and ((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) same light near10 (diffract or diffracted or diffractive or diffraction)) and (lead or leadframe or lead-frame or (lead near frame)) and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:19
L44	167	((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) same light near10 (diffract or diffracted or diffractive or diffraction)) and (lead or leadframe or lead-frame or (lead near frame)) and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:20

## EAST Search History

L45	42	((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) and light near10 (diffract or diffracted or diffractive or diffraction) near10 (integrate or integrated or integration)) and (lead or leadframe or lead-frame or (lead near frame)) and grating	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:22
L46	1	((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) and light near10 (diffract or diffracted or diffractive or diffraction) near10 (integrate or integrated or integration)) and (lead or leadframe or lead-frame or (lead near frame)) and grating and (surface near mount)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:22
L47	3	((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) and light near10 (diffract or diffracted or diffractive or diffraction) near10 (integrate or integrated or integration)) and (lead or leadframe or lead-frame or (lead near frame)) and grating and (vcsel or (surface near mount))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:23
L48	35	((epoxy or resin or encapsulant or encapsulate or encapsulating or encapsuated or encapsulation) and light near10 (diffract or diffracted or diffractive or diffraction) near10 (integrate or integrated or integration)) and (lead or leadframe or lead-frame or (lead near frame)) and grating and (laser or vcSEL or (surface near mount))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:23

## EAST Search History

L50	7	I49 and ((predetermined or predesignated) near2 pattern)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:25
L51	9	I49 and ((predetermined or predesignated) near5 pattern)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:25
L52	2	I49 and ((diffract or diffracting or diffracted or diffractive) with (predetermined or predesignated). near5 pattern)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:26
L53	3	I49 and ((diffract or diffracting or diffracted or diffractive) with (directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:36
L54	7	I49 and ((diffract or diffracting or diffracted or diffractive or grating) with (directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:37
L55	29	I49 and ((diffract or diffracting or diffracted or diffractive or grating) with (direction or directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:39
L56	31	I49 and ((diffract or diffracting or diffracted or diffractive or grating) with (direct or directed or direction or directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:39
L57	5	I49 and ((resin or epoxy) same (diffract or diffracting or diffracted or diffractive or grating) with (direct or directed or direction or directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:40
L58	6	I49 and ((resin or epoxy or encapsulant) same (diffract or diffracting or diffracted or diffractive or grating) with (direct or directed or direction or directional or (predetermined or predesignated) near5 pattern))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:40

## EAST Search History

L59	6	I49 and ((resin or epoxy or encapsulant) same (diffract or diffracting or diffracted or diffractive or grating) with (direct or directed or direction or directional or ((predetermined or predesignated) near5 pattern)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:41
L60	8	I49 and ((resin or epoxy or encapsulant) same (diffract or diffracting or diffracted or diffractive or grating or diffraction) with (direct or directed or direction or directional or ((predetermined or predesignated) near5 pattern)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:41
L61	11	I49 and ((resin or epoxy or encapsulant) same (diffract or diffracting or diffracted or diffractive or grating or diffraction) same (direct or directed or direction or directional or ((predetermined or predesignated) near5 pattern)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:41
L62	6	I49 and ((resin or epoxy or encapsulant) same (diffract or diffracting or diffracted or diffractive or grating or diffraction) same (direct or directed or direction or directional or ((predetermined or predesignated) near5 pattern))) and (lead or leadframe or lead-frame)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:42
L63	17	I49 and ((diffract or diffracting or diffracted or diffractive or grating or diffraction) same (direct or directed or direction or directional or ((predetermined or predesignated) near5 pattern))) and (lead or leadframe or lead-frame)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:42

## EAST Search History

L65	2	I64 and predesignated	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:46
L66	41	I64 and (predetermined or predesignated)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/18 12:46